In the Claims

1. (original) In a storage system having a bus operatively coupled to a first controller chip and a first channel chip, the channel chip having several registers, the storage system also having a storage medium operatively coupled to the bus through a storage medium interface, a method for retrieving data recorded on a storage medium comprising steps of:

(a) retrieving a first portion of the recorded data via the bus;

(b) updating some of the registers via the bus; and

(c) retrieving a second portion of the recorded data via the bus.

2. (original) The method of claim 1 in which the interface includes a read head, further comprising a step (d) of repositioning the storage medium interface with respect to the storage medium, between retrieving steps (a) and (c).

3. (original) The method of claim 2 in which the interface has a plurality of operating parameters that are modified in updating step (b).

4. (original) The storage system of claim 1 configured to perform the method of claim 1 in which the registers contain at least one read channel parameter value selected from the group consisting of: a precompensation value, a filter coefficient value, and a phase offset value.

5. (original) The storage system of claim 1 configured to perform the method of claim 1 in which the registers contain at least one mode-indicative value.

6. (original) In a storage system having a disc with at least two zones having zone identifiers Z_A and Z_B, an interface configured to read data in zone Z_A, a target segment in zone Z_B, a value table indexed by zone identifiers, a direct memory access (DMA) controller, a

microprocessor coupled to the DMA controller, and several read channel registers each containing a value, a method comprising steps of:

(a) retrieving via the DMA controller several values indexed by zone identifier Z_B;

(b) updating at least some of the read channel register values from the retrieved values;

(c) reconfiguring the interface to read data in zone Z_B; and

(d) reading the target segment.

7. (original) The method of claim 6 in which the target segment has a predetermined starting track number, further comprising a step of deriving zone identifier Z_B from the predetermined starting track number before retrieving step (a).

8. (original) The method of claim 6 in which the interface includes at least one head, in which positioning step (c) includes a step of (c1) moving the at least one head radially across the disc, the moving step (c1) beginning before retrieving step (a) is complete.

9. (original) The method of claim 8 in which moving step (c1) begins before retrieving step (a) begins.

10. (original) The method of claim 6 in which zone Z_B has a corresponding data rate R_B that is not in common with zone Z_A, in which positioning step (c) includes a step of (c2) sampling a signal from the interface at an initial frequency that is an integer multiple of data rate R_B.

11. (original) The method of claim 6 further comprising prior steps of:

(e) configuring the interface to read data in zone Z_B;

(f) receiving a signal from the interface;

(g) deriving several values indicative of the interface's performance in zone Z_B from the received signal; and

(h) storing some of the derived values in the value table each at a position associated with zone Z_B.

12. (original) The method of claim 6 in which the storage system includes an integrated circuit comprising the microprocessor, and in which the retrieving step (a) comprises issuing at least one but fewer than 10 commands from the microprocessor to the DMA controller.

13. (original) The method of claim 12 further comprising steps of:

(j) sensing position data from a servo sector via the interface; and

(k) deriving a servo control signal from the sensed position data with the microprocessor during step (b).

14. (original) The storage system of claim 6 configured to perform the method of claim 6 further comprising a printed circuit board assembly including a memory containing the value table, the storage system comprising:

a master integrated circuit (IC) containing the microprocessor and the direct memory access (DMA) controller, the DMA controller being operatively coupled to the memory;

a slave IC containing the several read channel registers; and

a bus coupled between the master IC and the slave IC, the bus controllable by the DMA controller to perform updating step (b).

15. (presently amended) A disc drive comprising:

~~a disc stack comprising~~ at least one disc;

an interface configured to read data from the at least one disc;

a memory containing several values indexed by zone identifiers;

a first controller chip containing a microprocessor and a direct memory access (DMA) controller, the DMA controller operatively coupled to the memory;

a first channel chip having several registers; and

a bus operatively coupled between the interface and the chips, the bus controllable by the DMA controller to read from the memory and to update several of the registers in response to a zone transition event.

16. (previously presented) A method comprising steps of:

(a) providing data via a bus;

(b) updating at least one register or parameter via the bus; and

(c) providing data via the bus responsive to the updating.

17. (previously presented) The method of claim 16 wherein the bus is serial.

18. (previously presented) The method of claim 16 wherein the bus is parallel.

19. (previously presented) The method of claim 16 wherein the steps are controlled by a processor.

20. (previously presented) The method of claim 16 wherein the steps are controlled by a direct memory access apparatus.